

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number  
**WO 2004/046900 A3**

(51) International Patent Classification<sup>7</sup>: **G06F 1/16**

(21) International Application Number:  
PCT/EP2003/013000

(22) International Filing Date:  
20 November 2003 (20.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
02025987.5 21 November 2002 (21.11.2002) EP  
60/429,268 26 November 2002 (26.11.2002) US

(71) Applicant (for all designated States except US): **SONY ERICSSON MOBILE COMMUNICATIONS AB**  
[SE/SE]; S-221 88 Lund (SE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SÖDERLUND, Marcus** [SE/SE]; Sandhamnsgatan 12, S-115 40 Stockholm (SE).

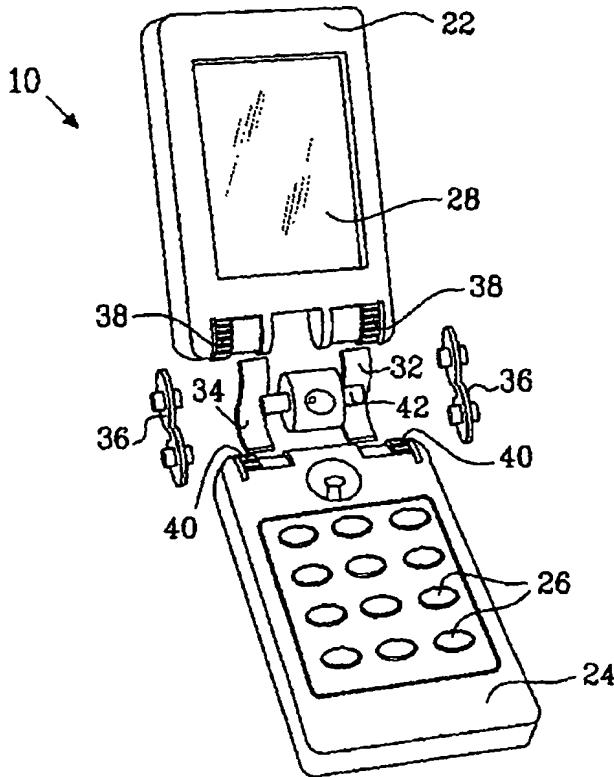
(74) Agent: **DAHNER, Christer**; Ström & Gulliksson IP AB, P.O. Box 7086, S-103 87 Stockholm (SE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

*[Continued on next page]*

(54) Title: FLEXIBLE CONDUCTORS CONNECTED BETWEEN TWO PARTS OF A PORTABLE ELECTRONIC DEVICE



(57) Abstract: The present invention is directed towards a portable electronic device comprising a first part including electrical circuits and having an exterior side, an interior side (24), and a bottom side, a second part also including electrical circuits and also having an exterior side, and interior side (22) and a bottom side, at least one hinge (36) connecting the bottom sides of the first and second parts to each other and allowing rotation of one part in relation to the other, and at least one first set (32) of flexible electrical conductors connected to the first part at the exterior side adjacent the bottom side thereof and to the second part at the interior side (22) adjacent the bottom side thereof. The first part can also comprise a camera having a lens on the interior side and the second part can comprise a display (28) provided on the interior side.



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report

**(88) Date of publication of the international search report:**

2 September 2004

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 03/13000

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G06F1/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 178 647 A (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.) 6 February 2002 (2002-02-06) abstract	1,3, 5-10,12, 14-17
A	page 2, column 1, line 7 - page 6, column 9, line 7 figures 1-11 ----- US 2001/055384 A1 (YAMAZAKI ET AL.) 27 December 2001 (2001-12-27) abstract page 4, column 2 - page 25, column 1 figures 1a,1b,3a,3b,4a,4b,28a,28b,28c ----- -/-	2,4,6, 11,13, 18-20 1-20

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## ° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

- "&" document member of the same patent family

Date of the actual completion of the International search

22 June 2004

Date of mailing of the International search report

06/07/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

GONZALEZ GUTIERREZ

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/13000

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/84269 A (MOTOROLA INC.) 8 November 2001 (2001-11-08) abstract pages 3-12; figures 1-19 -----	1-20
A	US 6 266 236 B1 (KU ET AL.) 24 July 2001 (2001-07-24) abstract the whole document -----	1-20

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/13000

Patent document cited in search report	Publication date	Patent family member(s)			Publication date
EP 1178647	A 06-02-2002	JP 2002051131 A			15-02-2002
		JP 2002051132 A			15-02-2002
		CN 1337813 A			27-02-2002
		EP 1178647 A2			06-02-2002
		US 2002042252 A1			11-04-2002
US 2001055384	A1 27-12-2001	JP 2001339492 A			07-12-2001
WO 0184269	A 08-11-2001	US 6658272 B1			02-12-2003
		AU 5563301 A			12-11-2001
		BR 0110411 A			10-06-2003
		CN 1430816 T			16-07-2003
		EP 1297404 A2			02-04-2003
		JP 2003532351 T			28-10-2003
		WO 0184269 A2			08-11-2001
		US 2004067783 A1			08-04-2004
US 6266236	B1 24-07-2001	US 6005767 A			21-12-1999
		TW 393597 B			11-06-2000
		WO 9926125 A1			27-05-1999

1/4

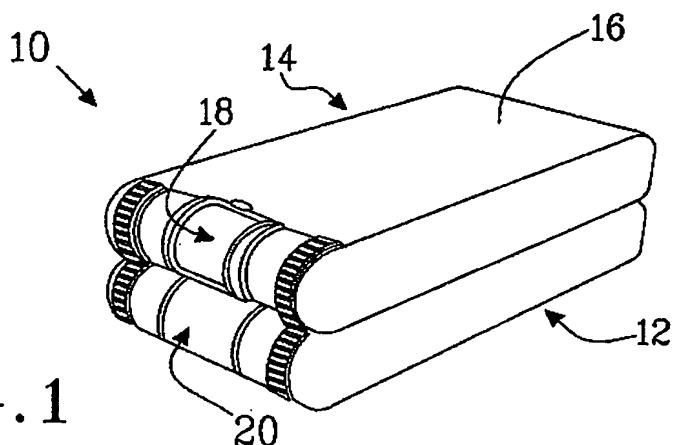


FIG. 1

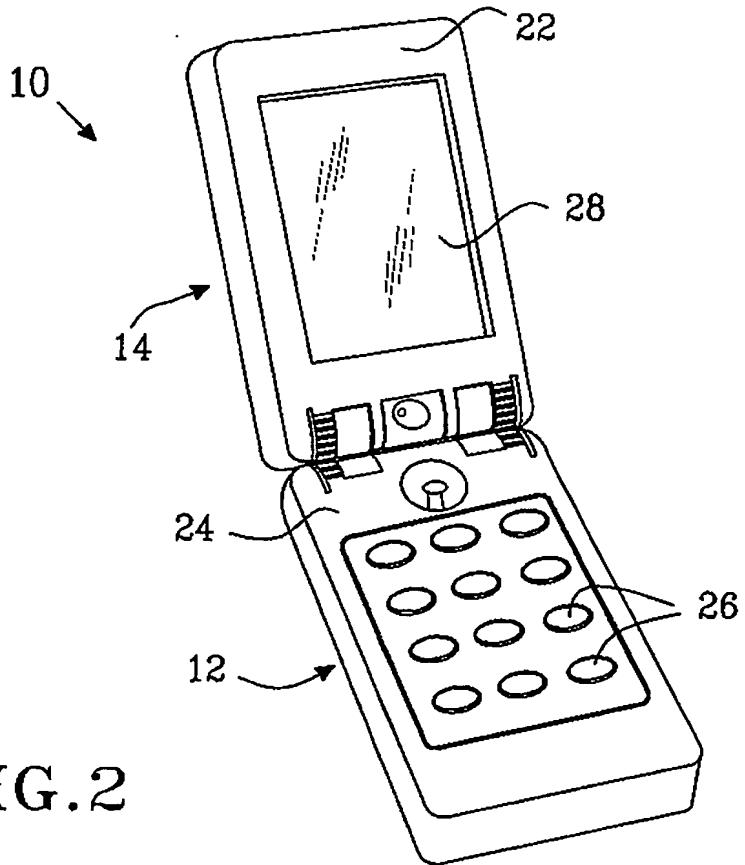


FIG. 2

2/4

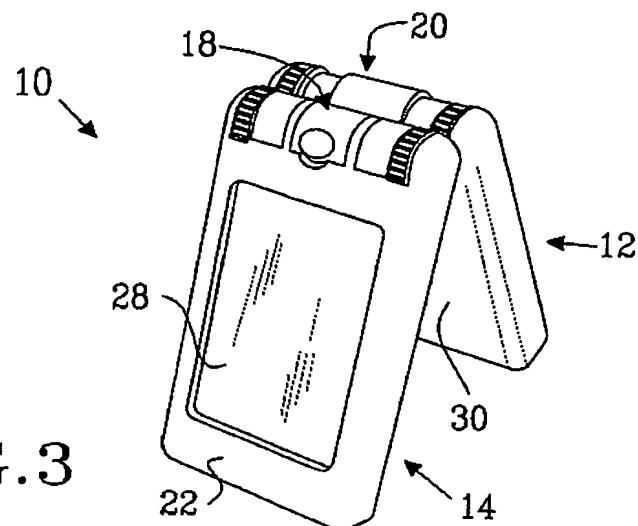


FIG. 3

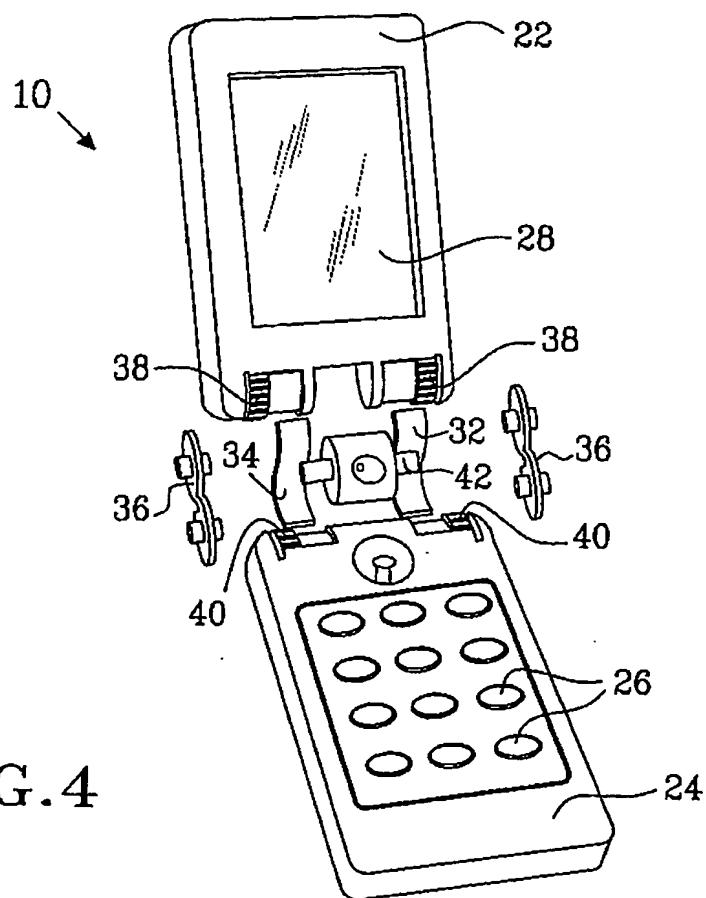


FIG. 4

3/4

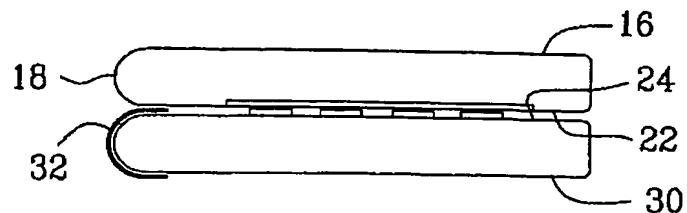


FIG. 5

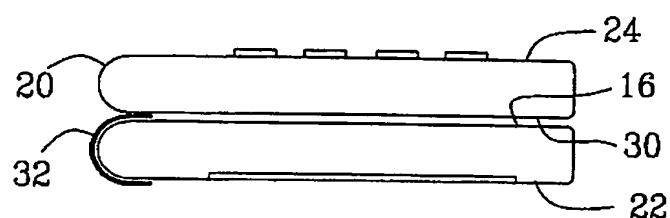


FIG. 6

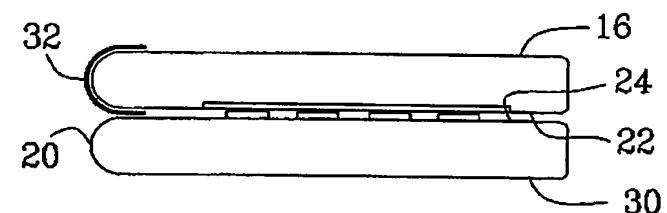


FIG. 7

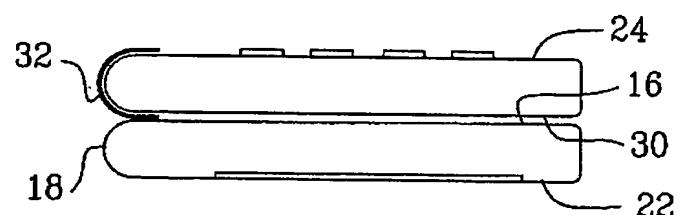


FIG. 8

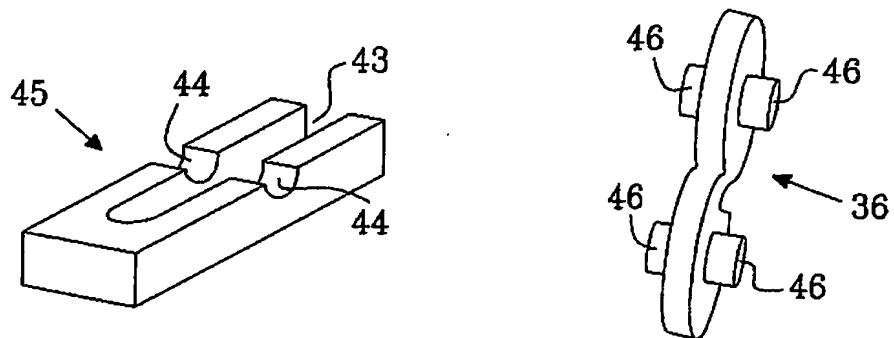


FIG. 9

FIG. 10

4/4

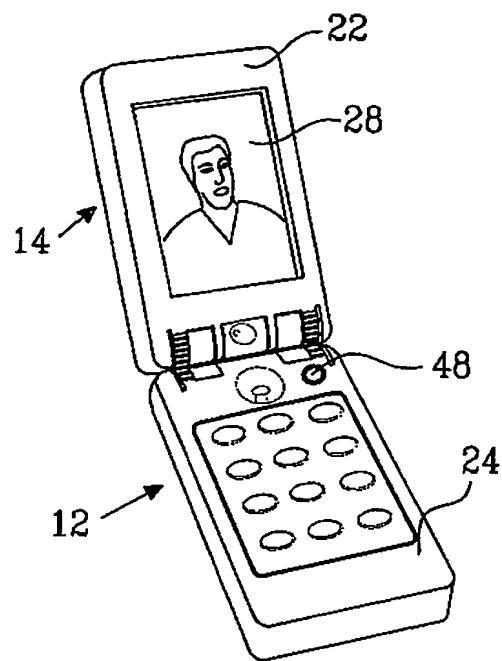


FIG. 11

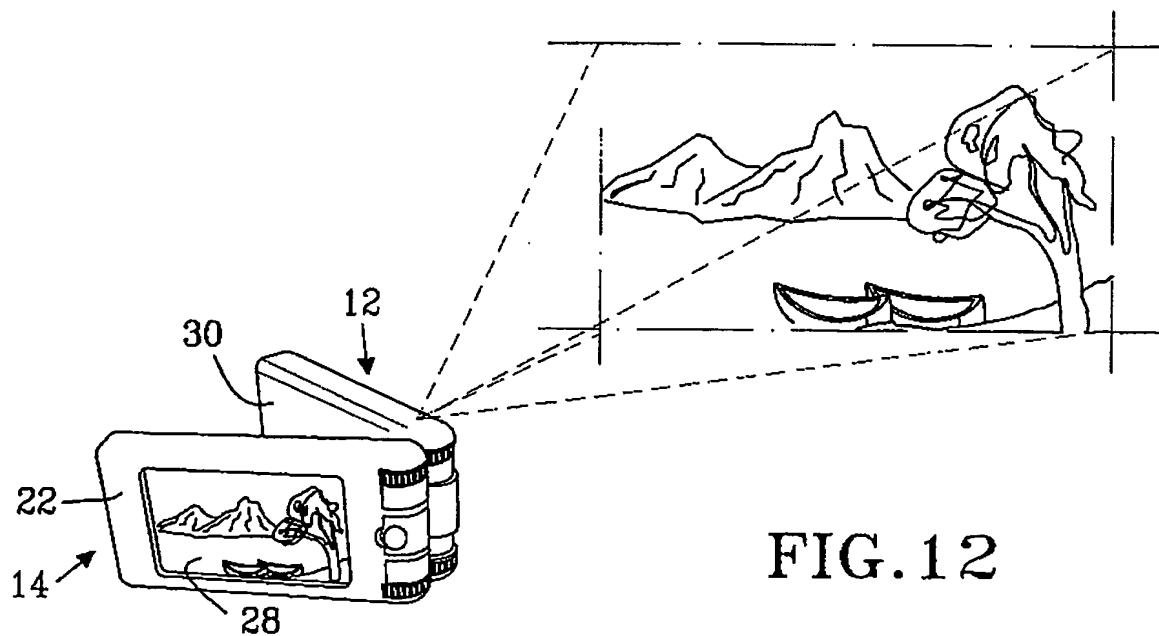


FIG. 12